

An ethnobotanical study among Albanians and Aromanians living in the Rraicë and Mokra areas of Eastern Albania

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Abstract Ethnobotanical research in South-Eastern Europe is crucial for providing the baseline data needed for both implementing community-based management of the local natural resources and (further) developing small-scale markets of local herbal and food products. An ethnobotanical study was carried out among (Muslim) Albanians and (Christian Orthodox) Aromanians living in the Rraicë and Mokra areas of Eastern Albania. The survey was conducted by interviewing 36 local, elderly individuals from five villages regarding the traditional uses of wild food plants, medicinal foods, and home-made medical remedies devoted to both humans and animals. Thirty-six plant taxa were found to comprise the local wild food cuisine as well as the cuisine of *medicinal foods* and cultivated plants prepared in unusual ways; 59 plant taxa were

used in human folk medicine and 20 plant taxa in local ethnoveterinary practices. In total, 221 preparations, the large majority plant-based, were recorded. Among the findings, the uncommon food uses of potato leaves as a vegetable and lactic-fermented potato tubers (until the recent past), the widespread use of *Chenopodium* and *Rumex* spp. as wild vegetables, as well as the leaves of *Ilex aquifolium* as a diuretic remedy, dried wild orchid tubers to treat cough and helminthiasis, and elderberry flowers to treat wounds, deserve further investigation. Approximately half of the plant uses reported by Aromanians were not recorded among Albanians, thus suggesting divergent ethnobotanical pathways, perhaps due to the different religious faiths of the two communities, which have prevented intermarriage over the last few centuries.

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Introduction

In recent years, the entire Balkans (defined as the South-Eastern European region located south of the Danube-Sava-Kupa river systems line) has been the focus of several ethnobiological studies intended to record a specific section of the bio-cultural heritage, which is represented by Traditional Ecological/Environmental Knowledge (TEK) related to the

perceptions and uses of plants (Łuczaj et al. 2013; Luczaj et al. 2013; Menković et al. 2011; Mustafa et al. 2012a, b; Nedelcheva 2013; Nedelcheva and Dogan 2011; Pieroni et al. 2011, 2012, 2013, 2014a, b; Pieroni and Quave 2014; Quave and Pieroni 2014; Rexhepi et al. 2013; Savikin et al. 2013; Zlatković et al. 2014) and animals (Lescureux and Linnell 2010; Lescureux et al. 2011a, b).

In Albania, in particular, given its complex historical vicissitudes during the past several centuries, the fact that the country remained largely isolated for most of the twentieth century and that small-scale agro-pastoral activities still represent the lynch-pin of subsistence economies for many people living in mountainous and rural areas, TEK-centred studies are not only important for understanding local perceptions and uses of plants, but also for providing baseline data that can be “used” in projects intended to foster truly sustainable rural development programs.

On the other hand, the Balkans has served as the primary European “sanctuary” of wild and cultivated medicinal and aromatic plants for a few centuries, and this is a tradition that continues today (Kathe et al. 2003; Londoño et al. 2008).

However, the use and management of local plant genetic resources need to be culturally sensitive; in other words, the “emic” perceptions that local populations have towards their natural environment must be taken into account in order to successfully implement bio-conservation initiatives.

The goal of the present study, therefore, was to further document TEK related to plants in the mountainous and rural regions of Albania, focusing on two areas—the territories of Rrajcë and Mokra—located in the east of the country, which are largely unknown in both the historical-folkloric literature and the new, increasing eco-tourist trajectories.

Moreover, the Mokra area is the home of a small community (Llengë/Lunca) belonging to one of the endangered linguistic minorities of Europe (Lewis 2014): the Aromanians, who define themselves in the study as *Rrämeni* (*Rrämani*), while Albanians name them using the term *Cobanë*.

They are a Latin population of (mainly) Orthodox Christian faith, which traditionally practiced a trans-human pastoralism in SE Europe and lives now scattered throughout the southern Balkans. Their ethnogenesis is still disputed; they may represent the descendants of ancient Latin speakers or “latinized”

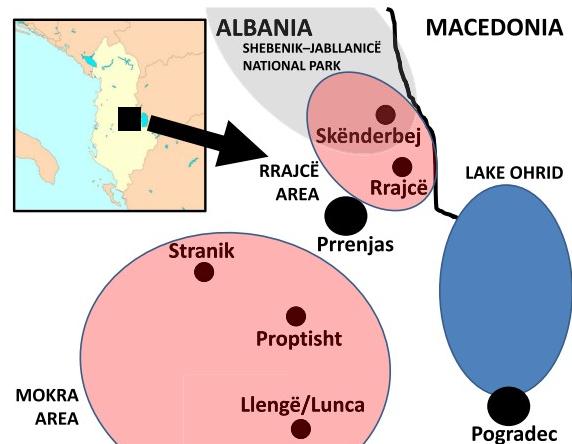


Fig. 1 The study sites

autochthonous Balkan populations—Greeks, Illyrians, and Trakians, or even of Romanian populations, who moved southwards (Burileanu 1912; Dahmen 2005; Kahl 1999; Schwandner-Sievers 1999; (Trifon 2013); Wace 1914; Weigand 1894; Winnifirth 1987).

They still speak nowadays a language (Aromanian) belonging to the Romanian group; all over Albania there are probably still only five scattered tiny villages, which are entirely inhabited by Aromanians (Kahl 1999).

Thus, the objectives of this study were: (a) to document the ethnobotanical knowledge related to plant-based wild food cuisine, medicinal foods, and domestic remedies for humans and animals in the Rrajcë and Mokra areas, among the elderly population of both Albanians and Aromanians; (b) to compare the collected data between the two linguistic communities; and (c) to compare these with the findings of other ethnobotanical surveys recently conducted in the Western Balkans in order to assess novel and promising plant uses.

Methods

Study areas

The Rrajcë and Mokra areas are located in Eastern Albania (Fig. 1).

The Rrajcë area is located close to the town of Prrenjas, within the Shebenik–Jabllanicë National Park. The park, which borders the Republic of Macedonia, was established in 2008 and is one of the sanctuaries in Europe for the brown bear and the Balkan lynx.

The Mokra area in contrast is a mountainous territory located to the South of Rrjacë and to the West of Lake Ohrid in the district of Pogradec, which is considered one of the most economically disadvantaged areas of the country (INSTAT 2012).

In particular, the study was conducted in five villages, four of them inhabited by Muslim Albanians, including Rrjacë (662 m a.s.l.) and Skënderbej (976 m a.s.l.) which are located in the Rrjacë area, and Stranik (769 m a.s.l.) and Praptisht (557 m a.s.l.) which are located in the Mokra area. The last village, also located in the territory of Mokra, was Llengë (in Rrämâni/Aromanian known as Lunca, 968 m a.s.l.), which is inhabited by Orthodox Aromanians only. The overall permanent estimated population of the five villages is approximately 1,500 people, and circa 40 of them represent the last remaining Aromanians living in Lunca.

Field study

The field study was conducted in April 2014; the sampling was conducted identifying study participants from among elderly individuals who retain traditional knowledge concerning plants. In-depth open and semi-structured interviews were then conducted with 36 selected villagers (26 Albanians and 10 Aromanians). The participants, including 12 women and 24 men, were between the ages of 37 and 95 years, with the majority of the informants from both communities above 65 years of age. Study participants were asked about traditional uses of plants and other domestic remedies in the food and medicinal domains (for both humans and animals). Specifically, local name(s) of each reported taxon, the plant part(s) used, and in-depth details about their manipulation/preparation and food or medicinal use(s) were recorded. Study participants were asked to report current uses considered “traditional”, i.e. considered part of the perceived cultural heritage, as well as uses they could recall from their childhood, which may no longer be exploited. Interviews were conducted in the native languages of the participants (Albanian among Albanians and Aromanian among Aromanians) with the help of two bilingual simultaneous translators. Prior informed consent from all participants was verbally obtained prior to conducting interviews and ethical guidelines prescribed by the International Society of Ethnobiology (ISE 2008)

were followed. During the interviews, informants were always asked to show the reported plants (fresh or dried). As with the previous fieldwork we conducted in the neighboring Gollobordo area (Pieroni et al. 2014b), voucher specimens and photographs were taken. Taxonomic identification follows the official Flora of Albania (Paparisto et al. 1988; Qosja et al. 1992, 1996; Vangjeli et al. 2000), while for *Crataegus* spp. we referred to the Rosaceae's taxonomy in Euro+Med PlantBase (Raimondo 2011). Local plant names were transcribed following the rules of standard Albanian and Romanian languages.

Data analysis

The collected field data were compared with the ethnobotanical literature of Albania (Pieroni 2008, 2010; Pieroni et al. 2005; 2014a, b; Quave and Pieroni 2014; Sejdij 1984) and surrounding countries located in the southern part of the Balkans: Macedonia (Pieroni et al. 2013; Rexhepi et al. 2013), Kosovo (Mustafa et al. 2012a, b), Bulgaria (Ivancheva and Stantcheva 2000; Kültür and Sami 2009; Leporatti and Ivancheva 2003; Nedelcheva 2013; Nedelcheva and Dogan 2009, 2011), Romania (Borza 1968; Butura 1979; Drăgulescu 2006; Pieroni et al. 2012); and Greece (Pindus Mt.) (Bara 2005; Vokou et al. 1993).

Results and discussion

Wild food plant uses and uncommon cultivated plants/uses

Table 1 presents the recorded data concerning wild foods and medicinal foods (i.e. foods perceived to have a beneficial effect on health), as well as those cultivated plants and uses which diverge from the mainstream uses that are known in the fields of economic/food botany and commodity science. In the same table, those taxa and uses that were mentioned by more than half of the study participants are indicated in bold type.

Thirty-six plant taxa and 47 overall preparations were recorded.

As in many other mountainous areas of Albania (Pieroni 2008, 2010; Pieroni et al. 2005; Pieroni et al. 2014a, b), the most important wild vegetables in the

Table 1 Wild foods, medicinal foods, and uncommon cultivated food plants/uses recorded in the study area

| Ingredient/food plant taxon | Recorded folk name(s) of the plant/animal/ingredient | Food use(s) | (Eventual) reported beneficial effect(s) or other notes | ALB | RRĀ |
|--|---|--|--|-----|-----|
| Almond (<i>Prunus dulcis</i> (Mill.) D.A. Webb) seeds | Bajame ^{ALB} | Filling for wheat-flour based salty pies (<i>peta</i>) | | + | |
| Badger (<i>Meles meles</i> Linnaeus, 1758) meat | Baldosa ^{ALB} | Consumed cooked | Anti-rheumatic | + | |
| Bay (<i>Laurus nobilis</i> L.) leaves | Dafinē ^{ALB} Dafin ^{RRĀ} | Dried, seasoning in diverse food preparations (esp. river fish) | | + | + |
| Bear (<i>Ursus arctos</i> Linnaeus 1758) meat | Ariu ^{ALB} | Consumed cooked | Beneficial for those affected by nervous diseases (rare) | + | |
| Beech (<i>Fagus sylvatica</i> L.) seeds | Ahu ^{ALB} | Consumed raw as a snack | Exaggerated ingestion may cause headaches | + | |
| Bitter vetch (<i>Vicia ervilia</i> Willd.) seeds | Urof ^{ALB} | Roasted, then in decoction | Digestive | + | |
| Blackberry (<i>Rubus ulmifolius</i> Schott) fruits | Manafeira ^{ALB} | Fermented and distilled into <i>raki</i> | | + | |
| Carlina thistle (<i>Carlina acanthifolia</i> All.) flower receptacles | Shoshka ^{ALB} | Consumed raw as a snack | | + | |
| Chamois (<i>Rupicapra rupicapra balcanica</i> Bolkay 1925) meat | Turiā ^{RRĀ} | | | + | |
| Cherry plum (<i>Prunus cerasifera</i> Ehrh.) fruits | Dhi e egeř ^{ALB} Kaproll ^{ALB} | Consumed cooked (rare) | | + | |
| Chickpea (<i>Cicer arietinum</i> L.) seeds | Kumbull e egeř ^{ALB} | Distilled (<i>raki</i> ^{ALB} / <i>larvice</i> ^{RRĀ}) | | + | |
| Cornelian cherry (<i>Cornus mas</i> L.) fruits | Pruna agrā ^{RRĀ} | Flour obtained from the dried seeds is used to bake bread (mixed together with wheat flour) | | + | |
| Crab apple (<i>Malus syvestris</i> Miller) fruits | Qiqēt ^{ALB} | | | + | |
| Dandelion (<i>Taraxacum officinale</i> Weber) leaves | Zecera ^{RRĀ} | | | + | |
| Dock (<i>Rumex patientia</i> L. and <i>R. alpinus</i> L.) leaves | Thana ^{ALB} Cot ^{RRĀ} | Consumed raw as a snack or cooked with sugar to obtain jams or compotes | Cardiotonic ^{ALB} Anti-diabetic, appetite stimulant, anti-hypertensive, anti-rheumatic ^{ALB} , anti-headache ^{RRĀ} | + | + |
| Fat hen (<i>Chenopodium album</i> L.) leaves | Diviacka ^{ALB} Mollé e egeř ^{ALB} Gortinni ^{RRĀ} | Dried and consumed as a snack or boiled in water (<i>hoshaq</i>) and consumed (also as a recreation tea), fermented and distilled into <i>raki</i> ^{ALB} | "New" use, probably imported via back migration from Greece? | + | + |
| | Lule gomari ^{ALB} | Consumed raw in salad | Blood depurative | + | |
| | Liakra e egeř ^{ALB} Rěpic ^{ALB} | Filling for wheat-flour and corn-flour based pies (<i>peta</i> ^{ALB} and <i>pipēq</i> ^{ALB} , <i>pita</i> ^{RRĀ} and <i>pispelita</i> ^{RRĀ}); boiled with corn flour and milk soups (often in milk) | | | |
| | Kručē ^{ALB} Štej ^{RRĀ} | | | | |
| | Lobu ^{RRĀ} | Filling for wheat-flour and corn-flour based pies (<i>pita</i> ^{RRĀ} and <i>pispelita</i> ^{RRĀ}) | | | + |

Table 1 continued

| Ingredient/food plant taxon | Recorded folk name(s) of the plant/animal/ingredient | Food use(s) | (Eventual) reported beneficial effect(s) or other notes | ALB | RRĀ |
|---|--|--|---|-----|-----|
| Fox grape (<i>Vitis labrusca</i> L.) ripe fruits and branches | Rush ^{ALB} | Fruits used for seasoning lacto-fermented vegetables; branches—woven into crowns—are put on the top of the barrels of the lacto-fermented vegetables | Beneficial for the conservation of lacto-fermented pickles (branches) | + | + |
| Good King Henry (<i>Chenopodium bonus-henricus</i> L.) leaves | Lepjīta ^{ALB} Lepika ^{ALB} Quen ^{ALB} | Filling for wheat-flour and corn-flour based pies (<i>pēta</i> ^{ALB} and <i>pīpeq</i> ^{ALB}) | | + | |
| Hare (<i>Lepus europaeus</i> Pallas 1778) meat | Lepur ^{ALB} Lepu ^{RRĀ} | Consumed cooked (often) | | + | + |
| Hare bonasus | | Used as rennet | | | |
| Hawthorn (<i>Crataegus monogyna</i> L. and <i>C. serrata</i> Dzeykov) fruits | Muriz ^{ALB} (<i>C. monogyna</i> ; Muriz e vogēl; | Consumed raw as a snack | | | |
| Hazelnut (<i>Corylus avellana</i> L.) seeds | Lajthia ^{ALB} Alun ^{RRĀ} | Consumed raw or dried as a snack | Anti-rheumatic | + | + |
| Hedgehog (<i>Erinaceus europaeus</i> Linnaeus 1758) meat | Iriq ^{ALB, RRĀ} | Consumed cooked | | + | + |
| Jerusalem artichoke (<i>Helianthus tuberosus</i> L.) tubers | Shalgenē ^{ALB} Mere di tere ^{RRĀ} | Consumed raw as a snack | | + | + |
| Juniper (<i>Juniperus oxycedrus</i> L. and <i>J. communis</i> L.) cones | Genep ^{RRĀ} | Distilled into <i>arēcē</i> ^{RRĀ} | | + | |
| Lettuce (<i>Lactuca sativa</i> L.) leaves | Sallatē ^{ALB} | Filling for pies | | + | |
| Milk | | Drunk | Galactagogic | | |
| Mulberry (<i>Morus alba</i> L. and <i>M. nigra</i> L.) fruits | Man ^{ALB} | Fermented and distilled into <i>raki</i> | | + | |
| Nettle (<i>Urtica dioica</i> L.) leaves | Hithra ^{ALB} Urzāz ^{RRĀ} | Filling for wheat-flour and corn-flour based pies (<i>pēta</i> ^{ALB} and <i>pīpeq</i> ^{ALB} ; <i>pīta</i> ^{RRĀ} and <i>pīpelīta</i> ^{RRĀ}); boiled with corn flour and milk soups (often in milk) | Blood purgative; anti-rheumatic | + | + |
| Orače (<i>Atriplex hortensis</i> L.) leaves | Ruzic ^{RRĀ} Ruzaci ^{RRĀ} | Filling for pies | | + | |
| Oregano (<i>Origanum vulgare</i> L.) flowering aerial parts | Laboda ^{ALB} Labot ^{ALB} Rigoni ^{RRĀ} | Dried, seasoning in diverse food preparations and particularly potatoes | | + | |
| Owl (<i>Asio otus</i> Linneaus 1758) meat | Bu ^{ALB} | Consumed cooked (rare) | | + | |

Table 1 continued

| Ingredient/food plant taxon | Recorded folk name(s) of the plant/animal ingredient | Food use(s) | (Eventual) reported beneficial effect(s) or other notes | ALB | RRĀ |
|---|---|--|--|-----|-----|
| Pigweed (<i>Amaranthus retroflexus</i> L.) leaves | Nanë ^{ALB} Nenza ^{ALB} Ştiu^{RRĀ} | Filling for pies | | + | + |
| Potato (<i>Solanum tuberosum</i> L.) tubers | Kompirë ^{ALB} | Lacto-fermented in water and salt or in cheese and its brine (also 1 year long), then consumed | | + | |
| Potato leaves | | Boiled and then lacto-fermented in water and salt | | + | |
| Sloe (<i>Prunus spinosa</i> L.) fruits | Kulumbri ^{ALB} | Filling for pies (normally mixed with onions; used in the past) | | + | |
| Snail (<i>Helix pomatia</i> Linnaeus 1758) meat | Chernas ^{RRĀ} | Consumed raw as a snack | | + | |
| Whey | Hirra ^{ALB} | Consumed cooked with eggs, leek and onions | | + | |
| Wild boar (<i>Sus scrofa</i> Linnaeus 1758) meat | Derti i egor ^{ALB} Porc ^{RRĀ} | Consumed cooked | Beneficial to the kidneys, and for stomach-ache and ulcers; depurative for all organs | + | |
| Wild leek (<i>Allium scorodoprasum</i> L.) aerial parts | Puri e egor ^{ALB} | Filling for wheat-flour and corn-flour based pies (<i>peta</i> ^{ALB} and <i>pipeq</i> ^{ALB}) | | + | |
| Wild pear (<i>Pyrus pyraster</i> Burgst.) fruits | Gorica ^{ALB} | Consumed as a snack after letting them ripen on straw; or cooked with sugar to obtain a thickened juice (<i>pekmez</i>); fermented and distilled in <i>rakf</i> ^{ALB} | | + | |
| Wild strawberry (<i>Fragaria vesca</i> L.) fruits | Luleshtrydhe ^{ALB} | Consumed raw as a snack | | + | |
| Wild thyme and savory (<i>Thymus pulegioides</i> L. and <i>Satureja montana</i> L.) flowering aerial parts | Listier ^{ALB} Rigoni alba ^{RRĀ} (only <i>Satureja montana</i>) | Seasoning in diverse culinary preparations | Honey deriving from its flowers considered very healthy | + | |
| Yogurt ricotta (from cow milk) | Gjizë ^{ALB} | Consumed fresh, without salt | Beneficial to the spleen | + | |

ALB: name(s) or use(s) recorded among Albanians

RRĀ: name(s) or use(s) recorded among Rrāmâni (Aromanians)

In bold: taxa and uses mentioned by at least half of the participants

local cuisine were represented by *Urtica*, *Chenopodium* and *Rumex* spp., while the most commonly mentioned wild fruits were *Cornus mas* and *Malus sylvestris*.

In addition to a few wild animals, consumed in the study areas for the most part in the past and during times of famine, a number of uncommon uses of wild and cultivated plants emerged from the interviews:

- almonds in savory pies, in the lower part of the Mokra area;
- chickpea flour—mixed with wheat flour—in baking bread;
- fox grapes as a seasoning, and grapevine branches as a preservative in lacto-fermented, pickled vegetables;
- wild pears, for preparing both *pekmez* (a kind of concentrated juice) and, via a preliminary fermentation, *raki* (distillate);
- potato leaves (until the recent past) as a filling for savory pies, which confirms our previous ethnobotanical findings from Albanians living on the Macedonian side of Mt. Korab and Macedonians of Gollobordo (Pieroni et al. 2013; Pieroni et al. 2014b), as well as the tradition of lacto-fermenting potatoes, in both salted water and cheese brine.

The latter uncommon folk uses of potatoes, which share commonalities with those we recorded among Slavs in surrounding mountainous areas, as well as the fact that in the study area Albanians name the potato plant with a Slavic term, could suggest that these customs have been acquired by neighboring Slav populations.

We observed similar linguistic patterns for *Malus sylvestris*, *Atriplex hortensis*, and, to a minor extend, *Rosa canina*, which, in the Rraicë area, are traditionally named by Slavic phytonyms.

These findings could re-address the open question of a possible Slavic influence or even origin of the Rraicë area, as suggested in the past by a few Slavic historians and geographers (Tomić 1936; Trifunoski 1992).

Folk plant uses in human medicine

Table 2 presents the domestic folk remedies mentioned by the informants; as in the previous table, those taxa and uses that were reported by more than half of the study participants are indicated in bold type.

Sixty-three plant folk taxa (59 identified, 4 unidentified) and 140 preparations were recorded.

The most commonly used teas mentioned by the study participants included *Rosa*, *Tilia*, *Oreganum*, *Ilex* and *Sideritis* spp., which, with exception of the last two genera, also represent the most common infusions in the mountainous regions of North and Northeast Albania.

The case of *Ilex aquifolium* is particularly interesting given that the diuretic use of its leaves in teas, which is extremely widespread in the two areas investigated here, seems to be completely unknown in South Balkan ethnobotany, as well in Serbian and Bosniak folk and historical phytotherapy (Jarić et al. 2007, 2011; Pieroni et al. 2011; Šarić-Kundalić et al. 2010a, b, 2011; Savikin et al. 2013; Zlatković et al. 2014). This finding, therefore, may warrant further phytochemical and phytopharmacological studies and an eventual clinical/therapeutical assessment.

As for external applications, the most commonly used remedies were fresh onions, *Plantago* leaves, *Ulmus* bark, fruit distillates (*raki*) and dried tobacco.

Other interesting and “unusual” medicinal plant reports, which may deserve further investigation, include the following:

- *salep* (tea derived from dried wild orchid tubers) used to treat cough and helminthiasis;
- *Petasites* leaves used to treat hemorrhoids;
- *Sambucus nigra* flowers used to treat wounds;
- concentrated mulberry (*Morus alba* and *M. nigra*) juice used to treat hepatitis;
- *Fomes* fungus used to treat burns, wounds, and warts;
- *Artemisia absinthium* used as a cardiotonic.

Veterinary plant uses

Table 3 presents the veterinary remedies mentioned by the informants; again, as in previous tables, those taxa and uses that were reported by more than half of the study participants are in bold type. Twenty plant taxa and 34 remedies represent the surviving ethnoveterinary heritage.

While most of the remedies have a sporadic use, and were used mainly in the past, the widespread veterinary use of dried *Helleborus* roots and stems and its application (inserted in the animal’s ear) confirm what is widely known also in the South-European

Table 2 Folk remedies recorded in the study area for treating human diseases

| Remedy/medicinal plant taxon | Recorded folk name(s) of the plant/animal/ingredient | Preparation | Administration | Reported local use(s) or treated disease(s) | ALB | RRÄ |
|--|--|--|---|---|--------------|-----|
| Apple (<i>Malus domestica</i> Borkh.) fruits | Molla ^{ALB} | Fermented and distilled into <i>raki</i> | Drunk hot with sugar (<i>poneči</i>) and inhaled or rubbed on the chest | Cough | + | |
| Ash | Hi ^{ALB} | Boiled in water | Drunk | Diarrhoea (kids) | + | |
| Barley (<i>Hordeum vulgare</i> L.) fruits | Eibi ^{ALB} | Roasted | Decoction | Digestive | + | |
| Bean (<i>Phaseolus vulgaris</i> L.) seed | Fasole ^{RRÄ} | Burned | Mixed with oil and externally applied with a hen's feather | Skin inflammations in babies and kids | + | |
| | Fasulja ^{ALB} | Cut in half | Externally applied for 30 min, then eventually adding melted cheese | Dog bite | + | + |
| Bear (<i>Ursus arctos Linnaeus</i> 1758) fat | Ariu ^{ALB} | Fresh | Externally applied | Burns; wounds | + | |
| Birch (<i>Betula pendula</i> Roth) leaves | Mështeker ^{ALB} | Tea | Drunk | Diuretic | + | |
| Blackberry (<i>Rubus ulmifolius</i> Schott) leaves | Manaferra ^{ALB} | Tea | Drunk | Stomach-ache, diarrhoea, cough | + | |
| Box (<i>Buxus sempervirens</i> L.) branches | Bush ^{ALB} | On 13 March in the evening it is put with other wild branches and flowers under a person's pillow (together with one apple and one walnut); on 14 March in the morning a warm water bath with all of these plants is taken | Ritual use (<i>halaturka/lule diverse feast</i>) | Considered apotropaic, good for the individual's general health | + | |
| Bran | Krunde ^{ALB} | Mixed with warm water | Externally applied under the ears | Mumps | + | |
| Butter | Gjapë ^{ALB} | Fresh | Inserted into the ear with a small piece of burning cotton (intended to "take out" the infection) | Ear inflammations | + | |
| | | | | Consumed | Galactagogue | |
| Butterbur (<i>Petasites hybridus</i> G. Gaertn., B. Mey. et Scherb.) leaves | Panacucu ^{RRÄ} | Cooked with wheat flour | Externally applied or consumed | Haemorrhoids | + | |

Table 2 continued

| Remedy/medicinal plant taxon | Recorded folk name(s) of the plant/animal/ingredient | Preparation | Administration | Reported local use(s) or treated disease(s) | ALB | RRĀ |
|--|--|--|---|---|-----|-----|
| Candle smoke | Tymi i qirit ^{ALB} | As such | Externally applied | Eye inflammations | + | |
| Charcoal | Qymyr druri ^{ALB} | Wood burned to produced charcoal on which sugar together with small pieces of the (presumed) gazer's belongings are thrown away; in other versions, the leftover charcoal has to be put on the feet of a tree on the morning following the procedure described above | Child exposed to the resulting vapours; the charcoal is eventually put in water and the water used to wash the child's face, and then thrown away | Evil Eye | + | |
| Cheese | Djathë ^{ALB} Kaş ^{RRĀ} | Melted on fire | Externally applied | Tooth-ache ^{ALB} , Dog bite ^{RRĀ} | + | + |
| Chicken feces | Glasa ^{ALB} | Dried | Hung on dress | Amulet against the Evil Eye (children) | + | |
| Child feces | Mut fëmije ^{ALB} | Fresh | Externally applied | Eye inflammation | + | |
| Chili pepper (<i>Capsicum annuum</i> L.) fruits | Biber ^{RRĀ} | Fresh | Externally applied with home-made distillate (<i>arcie</i> ^{RRĀ}) and covered by hare skin | Bruises | + | |
| Coffee beans (dried and roasted) | Kokra kafeje ^{ALB} | As such | Dressed | Amulet against the Evil Eye | + | |
| Cold water | Ujë i fiohtë ^{ALB} | As such | Decoction | Digestive | + | |
| Cornelian cherry (<i>Cornus mas</i> L.) fruits | Thana ^{ALB} | Fresh Tea | Externally applied Drunk | Burns Diarrhoea | + | |
| Cornelian cherry fruits | Cor ^{RRĀ} | Fermented and distilled into <i>raki</i> | Drunk hot with sugar (<i>ponçë</i>) and inhaled or rubbed on the chest | Cough | + | |
| | | Cooked in water to obtain a concentrated juice (<i>narden</i>) | Externally applied or drunk | Antispasmodic for pains caused by insect bites; diarrhoea | + | |
| | | Fresh or dried | Tea | Cough, cardiotonic RRĀ | + | |

Table 2 continued

| Remedy/medicinal plant taxon | Recorded folk name(s) of the plant/animal/ingredient | Preparation | Administration | Reported local use(s) or treated disease(s) | ALB | RRÄ |
|--|---|---|---|---|-----|-----|
| Cornelian cherry flowering branches | Thana ^{ALB} | On 13 March in the evening it is put with other wild branches and flowers under a person's pillow(together with one apple and one walnut); on 14 March in the morning a warm water bath with all of these plants is taken | Ritual use (<i>halatürkçe/lule diverse feast</i>) | Considered apotropaic, good for the individual's general health | + | + |
| Cornelian cherry tree bark | Thana ^{ALB} | Decoction | Drunk | Diarhoea | + | |
| Cow milk | Qumêşti lopës ^{ALB} | Fresh | Drunk | Galactagogue | + | |
| Cowslip (<i>Primula veris</i> L.) aerial parts | Sgrafete ^{ALB} | Tea | Drunk | Cough | + | |
| Crab apple (<i>Malus syvestris</i> Miller) fruits | Diviaçka ^{ALB} | Tea | Drunk | Appetite stimulant | + | |
| Cups | Kupa ^{ALB} | As such | Externally applied; suction is creating using fire primarily generated by matches | Bronchitis | + | |
| Dew | Vesg ^{ALB} | | Externally applied | Warts | + | |
| Dog feces | Mut qeni ^{ALB} | Mixed with flower and baked into a small bread | Given to the affected person to consume (the affected person is not supposed to know about the exact nature of the bread) | Hepatitis | + | |
| Dog rose (<i>Rosa canina</i> L.) pseudofruits | Tréndafil i eger ^{ALB} , Kerniyth ^{ALB} | Tea | Drunk | Diarrhoea (esp. for children), fever, haemorrhoids, fatigue, stomach-ache, cough, fatigue, diuretic, panacea ^{ALB} ; recreative ^{RRÄ} | + | + |
| Egg | Vezg ^{ALB} | Fresh | Eaten raw | Stomach-ache | + | |
| | | Fresh | Externally applied | Burns | + | |
| | | Mixed with flour | Consumed | Anaemia | + | |
| | | Mixed with soap and wool | Externally applied | Fractures | + | |

Table 2 continued

| Remedy/medicinal plant taxon | Recorded folk name(s) of the plant/animal/ingredient | Preparation | Administration | Reported local use(s) or treated disease(s) | ALB | RRÄ |
|---|---|--|--|--|-----|-----|
| Egg albumen | Bardhë veze ^{ALB} | Fresh Cooked | Externally applied Externally applied Topically applied with a bandage | Eye inflammations Eye inflammations Bruises | + | + |
| Egg yolk | Verdhë veze ^{ALB} | Mixed with soap | Externally applied with honey | Skin inflammations | + | + |
| Elderberry tree (<i>Sambucus nigra</i> L.) cambium | Sh tog ^{ALB} | Fresh | Externally applied | Wounds | + | + |
| Elderberry tree flowers | Sh tog ^{ALB} | Fresh | Externally applied | Wounds, burns | + | + |
| Elm (<i>Ulmus</i> sp.) bark | Vidh ^{ALB} , Vith ^{ALB} | Decoction | Externally applied | | | |
| Ewe (<i>Ovis aries</i> Linnaeus 1758) thickened yogurt | Arm ^{RRÄ} | Fresh | Consumed | Reconstituent | + | |
| Fig (<i>Ficus carica</i> L.) latex | Fik ^{ALB} | Fresh | Externally applied | Bee sting | + | |
| Fox grape (<i>Vitis labrusca</i> L.) fruits | Rrush ^{ALB} | Cooked with sugar and lime water to obtain a thickened juice (<i>pekməz</i>) | Consumed | Reconstituent for facing the cold winter temperatures, cardiotonic | + | |
| Fox grape unripe fruit juice | Rrush ^{ALB} | Fresh | Externally applied | Bee sting | + | |
| Fox grape fruits and fruit stalks | Rrush ^{ALB} | Fermented and distilled into <i>raki</i> | Drunk hot with sugar (<i>pomçə</i>) and inhaled or rubbed on the breast | Cough, flu | + | |
| | | | Externally applied | Wounds, bruises, rheumatisms | + | |
| Garlic (<i>Allium sativum</i> L.) Bulb | Hudhëra ^{ALB} A ₁ ^{RRÄ} | In necklaces Macerated in cold water | Dressed One drop applied on the child's eyes Drunk | Amulet against the Evil Eye (children) Evil Eye (children) | + | + |
| Gentiane (<i>Gentiana lutea</i> L.) aerial parts | Bar zemér ^{ALB} | Tea | | Cardiotonic | + | |
| Greater celandine (<i>Chelidonium majus</i> L.) aerial parts | Lule verdhë ^{ALB} | Fresh | Burned on charcoal; the resulting vapours are inhaled | Evil Eye | + | |
| Greater celandine latex | Lule verdhë ^{ALB} | As such | Externally applied | Warts | + | |

Table 2 continued

| Remedy/medicinal plant taxon | Recorded folk name(s) of the plant/animal/ingredient | Preparation | Administration | Reported local use(s) or treated disease(s) | ALB | RRĀ |
|---|---|--|---|---|-----|-----|
| Greater plantain (<i>Plantago major</i> L.) leaves | Lapēdelli ^{ALB} Şirşırı ^{RRĀ} | Fresh | External application Vein of the head is cut and the plant is externally applied | Wounds (suppurative) ^{ALB,RRĀ} | + | + |
| Gunpowder | Barut ^{ALB} | As such | Topically burned | Wounds | + | |
| Hawthorn (<i>Crataegus monogyna</i> L. and <i>C. sericea</i> Dzekov) leaves and fruits | Muriz ^{ALB} (<i>C. monogyna</i> : Muriz i vogël; <i>C. sericea</i> : Muriz e madhe) ^{ALB} Murris ^{RRĀ} | Tea | Drunk | Cough, fatigue, recreational ^{ALB} , headache ^{RRĀ} | + | + |
| Hellebore (<i>Helleborus odorus</i> Waldst. et Kit. ex Willd.) aerial parts | Kukural ^{ALB} | On 13 March in the evening it is put with other wild branches and flowers under a person's pillow (together with one apple and one walnut); on 14 March in the morning a warm water bath with all of these plants is taken | Ritual use (<i>halanikal/ute diverse feast</i>) | Considered apotropaic, good for the individual's general health | | |
| Hen (<i>Gallus gallus domesticus</i> Linnaeus 1758) | Pule ^{ALB} | Living animal | Hen's ass lying on the area of skin bitten by a snake, when the hen dies, the patient will be healed; in other versions the hen has to be slaughtered and immediately applied | Snake bite | + | |
| Holly (<i>Ilex aquifolium</i> L.) leaves | Gjemb ariu ^{ALB} Pemare ^{RRĀ} | Tea | Drunk | Diuretic, kidney stones, stomach-ache (rare), panacea | + | + |
| Horse feces | | Dried and burned | Insect repellent | | + | |

Table 2 continued

| Remedy/medicinal plant taxon | Recorded folk name(s) of the plant/animal/ingredient | Preparation | Administration | Reported local use(s) or treated disease(s) | ALB | RRĀ |
|--|--|--|--------------------------------|--|---|-----|
| Horsetail (<i>Equisetum arvense</i> L.) aerial parts | Bishtkali ^{ALB} | On 13 March in the evening it is put with other wild branches and flowers under a person's pillow (together with one apple and one walnut); on 14 March in the morning a warm water bath with all of these plants is taken | Tea Fresh | Ritual use (<i>halatürkçe/lule diverse feast</i>) | Considered apotropaic, good for the individual's general health | + |
| Houseleek (<i>Sempervivum</i> sp.) leaf juice | Herba da orechíe ^{RRĀ} | | Drunk Inserted in the ear | Diuretic Earache | + | + |
| Human urine | Urine ^{ALB} | Fresh | Drunk Externally applied | Hepatitis Toothache, wounds | + | + |
| Juniper (<i>Juniperus oxycedrus</i> L. and <i>J. communis</i> L.) cones | Döllinjia ^{ALB} | Tea | Drunk Drunk | Hepatitis Diuretic | + | + |
| Juniper cones | Genep ^{RRĀ} | Fermented in water to obtain a beverage | Drunk | Stomach-ache | + | + |
| Juniper branches | | Decoction | Externally applied | Perfuming agent | + | + |
| Leather belt | Rrip lekuri ^{ALB} | Scraped | Externally applied | Wounds (haemostatic) | + | + |
| Leech (<i>Hirudo medicinalis</i> Linnaeus 1758) | Piavica ^{ALB} | As such | Externally applied to the anus | Haemorrhoids | + | + |
| Leek (<i>Allium porrum</i> L.) aerial parts | Pras ^{ALB} Purri ^{ALB} | Fresh juice or decoction | Externally applied | Hepatitis, varicose veins, swollen lips, headache | + | + |
| Lemon balm (<i>Melissa officinalis</i> L.) aerial parts | Caj bleite ^{ALB} | Inserted in the ear | Earache | | | |
| Lime | Ilac ^{ALB} | Fresh Tea | Externally applied | Wounds (suppurative) | + | + |
| Lime tree (<i>Tilia cordata</i> Mill.) flowers | Cai blii ^{ALB} Cai blii ^{RRĀ} | Dissolved in water and emulsified with oil | Externally applied | Digestive, cardiotonic ("modern" use) | + | + |
| | | Tea | Drunk | Burns | | |
| | | | | Cough, headache, fever, hypertension ^{RRĀ} , panacea ^{ALB} | + | + |

Table 2 continued

| Remedy/medicinal plant taxon | Recorded folk name(s) of the plant/animal/ingredient | Preparation | Administration | Reported local use(s) or treated disease(s) | ALB | RRÄ |
|---|---|--|---|---|-----|-----|
| Maidenhair spleenwort (<i>Asplenium trichomanes</i> L.) aerial parts | Fier guri ^{ALB} Fir i egér ^{ALB} Therka agrá ^{RRÄ} | Tea | Drunk | Diuretic ^{ALB,RRÄ} , back pain ^{ALB} | + | + |
| Mallow (<i>Malva sylvestris</i> L.) leaves | Méllagé ^{ALB} | Fresh | External application | Wounds | + | |
| Milk | Quméshť ^{ALB} Çaj ^{ALB} Çaj malí ^{ALB} | Fresh Tea | Externally applied Drunk | Burns Cough, flu, digestive troubles, panacea, recreational; at higher doses considered tranquilising | + | |
| Mountain tea (<i>Sideritis raeseri</i> Boss. et Heldr.) flowering aerial parts | | | | Burns Hepatitis | + | |
| Mud | Balté ^{ALB} Man ^{ALB} | Fresh Fruits cooked to obtained thick, concentrated juice (<i>pemez</i>) | Externally applied Drunk (diluted with water) | Rheumatisms, bruises | + | |
| Mulberry (<i>Morus alba</i> L. and <i>M. nigra</i> L.) fruits | Hithra ^{ALB} Urzaž ^{RRÄ} | Fresh, sometimes mixed with salt | Externally applied | | | |
| Nettle (<i>Urtica dioica</i> L.) aerial parts | Urzic ^{RRÄ} Ruzica ^{RRÄ} Ruzaci ^{RRÄ} | Tea | Drunk | Haemorrhoids Considered apotropaic, good for the individual's general health | + | |
| Not unambiguously identified (<i>Eryngium</i> sp.?) (branches) | Gjemb i egér ^{ALB} | On 13 March in the evening it is put with other wild branches and flowers under a person's pillow (together with one apple and one walnut); on 14 March in the morning a warm water bath with all of these plants is taken | Ritual use (<i>halanuk/kalule divere feast</i>) | | | |
| Old coin | Kulmak ^{ALB} Nataciok ^{RRÄ} Bar zenér ^{ALB} Monedhë e vjetër ^{ALB} | Tea Fresh Tea As such | Drunk Externally applied Drunk Worn | Helminthiasis Wounds Cardiotonic Amulet against the Evil Eye (children) | + | + |

Table 2 continued

| Remedy/medicinal plant taxon | Recorded folk name(s) of the plant/animal/ingredient | Preparation | Administration | Reported local use(s) or treated disease(s) | ALB | RRĀ |
|--|---|---|--|--|-----|-----|
| Onion (<i>Allium cepa</i> L.) bulb | Qepë ^{ALB} | Cut in half and macerated in cold water | Macerate externally applied for 1 month (every day) on the eye | Eye/vision problems | + | |
| | | Fresh, crushed and mixed with salt | Externally applied | Bruises | + | |
| | Zepa ^{RRĀ} | Fresh | Consumed raw | To recover after abuse of alcohol | + | + |
| Oregano (<i>Origanum vulgare</i> L.) flowering aerial parts | Caj mali ^{ALB} Rrigon ^{ALB} Rigoni ^{RRĀ} | Tea | Drunk | Digestive, flu, panacea | + | + |
| Parsley (<i>Petroselinum crispus</i> (Mill.) Fuss) aerial parts | Magdanoz ^{ALB} | Tea | Drunk | Diuretic, prostatitis | + | |
| Piece of cloth | Copë leckë ^{ALB} | Burned | The resulting ash externally applied | Bruises | + | |
| Pine (<i>Pinus</i> spp.) wood | Pishka ^{ALB} | Burned; the resulting soot is mixed with women milk | Given to children to drink | Cardiotonic | + | |
| Pine and fir (<i>Pinus</i> and <i>Abies</i> spp.) resin | Pishë ^{ALB} Brad ^{RRĀ} | Warmed | Externally applied | Eye inflammations ^{ALB} ; wounds ^{ALB, RRĀ} | + | + |
| Plum and mirabelle (<i>Prunus domestica</i> L.) fruits | Kumbull ^{ALB} | Fermented and distilled into <i>raki</i> | Externally applied | Wounds, bruises rheumatisms, earache | + | |
| | | Fermented and distilled into <i>raki</i> | Drunk hot with sugar (<i>ponçë</i>) and inhaled or rubbed on the chest | Cough, flu | + | |
| | | Cooked in water to obtain a concentrated juice (<i>naran</i>) | Externally applied or drunk | Antispasmodic for pains caused by insect bites; diarrhoea, cardiotonic | + | |
| Plum and mirabelle unripe fruits | Pruna ^{RRĀ} | Fresh | Externally rubbed | Antispasmodic for pains caused by insect bites | + | |
| Potato (<i>Solanum tuberosum</i> L.) tuber | Kompirë ^{ALB} | Fresh, sliced | Externally applied (warm) | Eye inflammations | + | |
| Quince (<i>Cydonia oblonga</i> Mill.) leaves | Ftoi ^{ALB} | Tea | Drunk | Digestive, cough, fever | + | |
| Raw wool | Lesh ^{ALB} | As such | Externally applied | Rheumatism | + | |
| Red cloth | Leckë e kuqe ^{ALB} | As such | Placed on the animal for donkeys | Evil Eye (esp. as an amulet for donkeys) | + | |

Table 2 continued

| Remedy/medicinal plant taxon | Recorded folk name(s) of the plant/animal/ingredient | Preparation | Administration | Reported local use(s) or treated disease(s) | ALB | RRĀ |
|--|---|---|--|--|-----|-----|
| Red ribbon | Fjongo t kue ^{ALB} | As such | Worn | Amulet against the Evil Eye (children) | + | |
| Ribwort plantain (<i>Plantago lanceolata</i> L.) leaves | Bar prreč ^{ALB} | Freshly crushed | External application, sometimes with salt | Wounds (also indicated in case of internal haemorrhages) | + | |
| Salt | Kripč ^{ALB} | Mixed with water Thrown on fire | Gargles Ritual use | Tooth-ache Evil Eye (gazer's eye would have been destroyed) | + | |
| | | Mixed with water Dissolved in water | Footbath | Chilblains | + | |
| | | "Collected" externally on the sheep belly | Solution given to children to drink and also used to wash the child's face | Evil Eye | + | |
| Sheep sweat | Dierge dele ^{RRĀ} | "Collected" externally on the sheep belly | Externally applied | Tooth-ache | + | |
| Skin of a just slaughtered lamb or goat | Lékurë e kafishëve ^{ALB} | Fresh | "Worn" on the body; externally applied (2 days) | Flu; broken bones (this procedure is believed to "soften" the bones—after that folk surgeons may operate/manipulate bones) | + | |
| Sloe (<i>Prunus spinosa</i> L.) fruits | Kullumbri ^{ALB} Zapri ^{RRĀ} | Tea | Drunk | Recreational (rare) ^{ALB} ; stomach-ache, "healthy", ^{RRĀ} | + | |
| Spurge (<i>Euphorbia</i> spp.) latex | Shpendra ^{ALB} | Crashed | Externally applied | Hair dyeing | + | |
| St. John's Wort (<i>Hypericum perforatum</i> L.) flowering aerial parts | Lule balsami ^{ALB,RRĀ} Çaj moskovč ^{ALB} Lule breshe ^{ALB} | Tea | Drunk | Digestive ^{ALB} , Stomach-ache ^{RRĀ} | + | |
| Stone | Erbe di taiura ^{RRĀ} Gur ^{ALB} | Olelite Heated | Externally applied to the ear | Wounds To eliminate water in the ear | + | |
| | | As such | Pressed on the skin immediately after an insect bite | Inhibits swelling from insect bites | + | |

Table 2 continued

| Remedy/medicinal plant taxon | Recorded folk name(s) of the plant/animal/ingredient | Preparation | Administration | Reported local use(s) or treated disease(s) | ALB | RRÄ |
|---|--|--|--|---|-----|-----|
| Sugar | Sheqer ^{ALB} | Thrown on burning charcoal together with small pieces of the (presumed) gazer's belongings | Child exposed to the resulting vapours; the leftover charcoal has to be put on the feet of a tree on the following morning | Eyil Eye | + | |
| Tinder fungus (<i>Fomes fomentarius</i> (L.) Fr.) fruiting body | Eshkë ^{ALB} | Dried, as such; or boiled in water and ashes, then the resulting paste is dried | Externally applied and burned | Warts, wounds, burns | + | |
| Tobacco (<i>Nicotiana tabacum</i> L.) leaves | Duhan ^{ALB} | Dried, chopped | Externally applied | Wounds (haemostatic) | + | |
| Tomato (<i>Solanum lycopersicum</i> L.) aerial parts | Domate ^{ALB} | As such | Hanging | Insect repellent | + | |
| Turkey and Italian oak (<i>Quercus cerris</i> L. and <i>Q. frainetto</i> Ten.) branches | Dushk ^{ALB} | On 13 March in the evening it is put with other wild branches and flowers under a person's pillow (together with one apple and one walnut); on 14 March in the morning a warm water bath with all of these plants is taken | Ritual use (<i>halaturka/ülte divere</i> feast) | Considered apotropaic, good for the individual's general health | | |
| Veal (<i>Bos taurus</i> Linnaeus 1758) spleen | Shpretkë vig ^{ALB} | Cooked | Consumed | Anaemia | + | |
| Walnut (<i>Juglans regia</i> L.) seed | Arra ^{ALB} | Tea | Fumigations | Cough | + | |
| Wild orchid (<i>Orchis</i> spp.) tubers | Salep ^{ALB} Seca ^{RRÄ} | Tea | Drunk | Recreational (rare); cough; helminthiasis (children); oedemas | + | |
| Wild pear (<i>Pyrus pyaster</i> Burgsd.) fruits | Gorrica ^{ALB} | Fresh, chopped | Externally applied | Rheumatisms | + | |
| Wild thyme and savory (<i>Thymus pulegioides</i> L. and <i>Satureja montana</i> L.) flowering aerial parts | Çaj i egér ^{ALB} | Tea | Drunk | Diarrhoea | + | |
| | | | | Headache | + | |

Table 2 continued

| Remedy/medicinal plant taxon | Recorded folk name(s) of the plant/animal/ingredient | Preparation | Administration | Reported local use(s) or treated disease(s) | ALB | RRĀ |
|--|--|---------------------|--|---|-----|-----|
| Woman's milk (better if from a young woman ^{ALB}) | Qumëshët i gruas ^{ALB} | Fresh | Externally applied | Eye inflammation ^{ALB,RRĀ} ; earache ^{RRĀ} | + | + |
| Wormwood (<i>Artemisia absinthium</i> L.) aerial parts | Fëshëms ^{ALB} | Tea | Drunk | Cardiotonic, fever, malaria | + | |
| Yellow-legged rooster (<i>Gallus gallus domesticus</i> Linnaeus 1758) meat | Gjel këmbët e verdha ^{ALB} | Roasted in the oven | Fumigation of the vapours arising from the roasted rooster | Hepatitis | + | |
| | | Cooked in soup | Consumed | Hepatitis | | + |

ALB: name(s) or use(s) recorded among Albanians

RRĀ: name(s) or use(s) recorded among Rămăni (Aromanians)

In bold: taxa mentioned by at least half of the participants

(Guarrera 2006) and Eastern European (Papp et al. 2014; Péntek and Szabó 1985) folklore.

A substantial number of taxa reported in this section, however, represent ritual plant uses made on 14th March (*Dita e Verës*), the lunar Spring Day celebrated by Albanians.

Albanian versus Aromanian ethnobotany

Although a thorough comparison between the recorded Albanian and Aromanian ethnobotanical data is not feasible, given the tiny sample of Aromanian informants, i.e. the uneven number of informants within the two communities, a general trend can be observed.

Approximately half of the plant reports recorded among the Aromanian participants were not recorded among the Albanian informants, while thus indicating a possible notable divergence of the two plant traditions.

This finding may be easily explained by the isolation of the Aromanian village of Lunca and also the fact that the Albanian and Aromanian communities—both of which presumably represent the most ancient inhabitants of the South Balkans—have been separated for at least four or five centuries by their religious faiths (Albanians are Muslim while Aromanians are Orthodox Christians). Specifically, intermarriage between members of the two communities has not been permitted, even during the recent atheistic Communist period of the twentieth century, due to their different religious affiliations.

This observation may confirm the results of prior field studies, namely the remarkable role played by religious affiliation in the Balkans not only for the construction of ethnic identities but also for the transmission of the knowledge, beliefs, and practices related to the natural world and, in particular, to plants (Pieroni et al. 2011).

Aromanian folk plant names in Lunca

Table 4 shows the comparison between the folk names of the plants recorded in Lunca (and used for food or medicine) and the folk names of the same taxa in Romania (Borza 1968).

A comparison with the folk plant names recorded among the Aromanians of the Pindus Mt. in Greece

Table 3 Folk remedies recorded in the study area for treating animal diseases or for improving animal health

| Remedy/veterinary plant taxon | Recorded folk name(s) of the plant/animal/ingredient | Preparation | Administration | Reported local veterinary use(s) or treated animal disease(s) | ALB | RRĀ |
|--|--|---|--------------------------------------|---|-----|-----|
| Alfalfa (<i>Medicago sativa</i> L.) aerial parts | Jonxha ^{ALB} | Fresh | Fodder | Galactagogue | + | + |
| Barley (<i>Hordeum vulgare</i> L.) fruits | Elbi ^{ALB} | Boiled | Given to animals to eat | Cardiotonic | + | |
| Charcoal | Qymyr druri ^{ALB} | Powdered and mixed with salt | Given to animals to ingest | Diarrhea (ruminants) | + | |
| Chili (<i>Capsicum annuum</i> L.) fruits | Piperkë ^{ALB} | Dried and powdered | Given to chickens to eat | Diverse diseases affecting poultry | + | |
| Clove (<i>Trifolium</i> spp.) aerial parts | Terfilë ^{ALB,RRĀ} | Fresh | Fodder | Galactagogue | + | + |
| Copper sulphate | Gur kali ^{ALB} | Dissolved in water | External washes | Lameness | + | |
| Cornelian cherry (<i>Cornus mas</i> L.) flowering branches | Thana ^{ALB} | On 14 March hung on barn walls or animal horns | Ritual use (<i>Halatürka</i> feast) | Considered apotropaic, good for the animals' health and a prosperous dairy season | + | |
| Crab apple (<i>Malus sylvestris</i> Miller) fruits | Diviacka ^{ALB} | Fermented and distilled into raki | Externally applied | Lameness | + | |
| Daisy (<i>Bellis perennis</i> L.) flowering aerial parts | Lule dele ^{ALB} | On 14 March hung on animal horns | Ritual use (<i>Halatürka</i> feast) | Considered apotropaic, good for the animals' health and a prosperous dairy season | + | |
| Dandelion (<i>Taraxacum officinale</i> Weber) aerial parts | larpa di lepru ^{RRĀ} | Fresh | Fodder | Galactagogue | + | |
| Fox grape (<i>Vitis labrusca</i> L.) fruits | Rrush ^{ALB} | Cooked with sugar to obtain a thickened juice (<i>pekməz</i>) | Give to animals to eat | Lameness | + | |
| Fox grape fruits and branches | Rrush ^{ALB} | Fermented and distilled in raki | Externally applied | Lameness | + | |
| Greater plantain (<i>Plantago major</i> L.) leaves | Şirşırı ^{RRĀ} | Fresh | External application | Wounds | + | |
| Hellebore (<i>Helleborus odorus</i> Waldst. et Kit. ex Willd.) aerial parts | Kukurak ^{ALB,RRĀ} | On 14 March hung on barn walls | Ritual use (<i>Halatürka</i> feast) | Considered apotropaic, good for the animals' health and a prosperous dairy season | + | |

Table 3 continued

| Remedy/veterinary plant taxon | Recorded folk name(s) of the plant/animal/ingredient | Preparation | Administration | Reported local veterinary use(s) or treated animal disease(s) | ALB | RRĀ |
|--|--|---|---|---|-----|-----|
| Hellebore stem and root | Kukurak ^{ALB,RRĀ} | Dried | Inserted in the ear or placed on the neck of animals | Diverse diseases (sheep); pneumonia ^{ALB} (horses) ^{ALB} | + | + |
| Horse chestnut (<i>Aesculus hippocastanum</i> L.) seeds | Castagna agra ^{RRĀ} | As such | Given to animals to eat | Respiratory diseases | + | |
| Lime | Ilaç ^{ALB} | Fresh | Crushed and rubbed on sheep necks | Wolf bites on sheep necks | + | |
| Mud | Balte ^{ALB} | Dissolved in water | | Hoof inflammations | + | |
| Oak (<i>Quercus frainetto</i> Ten. and <i>Q. cerris</i> L. branches | Dushk ^{ALB} | As such | | Diarrhoea | + | |
| | | On 14 March hung on barn walls | Ritual use (<i>Halaturka</i> feast) | Considered apotropaic, good for the animals' health and a prosperous dairy season | + | |
| Oil | Vaj ^{ALB} | As such | | Constipation | + | |
| Olive oil | Vaj ullir ^{ALB} | As such, or mixed with sugar | Given to animals to drink | To treat poisonings due to the ingestion of toxic herbs or as a digestive | + | |
| Pear (<i>Pyrus communis</i> L.) fruits | Dardhë ^{ALB} | Cooked with sugar to obtain a thickened juice (<i>pekmëz</i>) | Given to animals to eat | Lameness | + | |
| Plum (<i>Prunus domestica</i> L.) flowering branches | Kumbull ^{ALB} | On 14 March hung on animal horns | Ritual use (<i>Halaturka</i> feast) | Considered apotropaic, good for the animals' health and a prosperous dairy season | + | |
| Spurge (<i>Euphorbia</i> spp.) latex | Shpendra ^{ALB} | Fresh | Externally applied in washes, after the area of the bite is punctured (with a plant thorn or a pointed bare bone) and poison and blood are expelled | Snake bite | + | |
| Spurge aerial parts | Shpendra ^{ALB} | As such | On 14 March hung on animal horns (<i>Halaturka</i> feast) | Considered apotropaic, good for the animals' health and a prosperous dairy season | + | |
| Sugar | Sheqer ^{ALB} | Mixed with water | Given to animals to drink | Constipation | + | |
| | | Dissolved in water | Given to animals to drink | To treat poisonings due to the ingestion of toxic herbs | + | |
| Sulfur | Squîr ^{ALB} | Burned in a fire | Animals forced to inhale the resulting vapors | Foot-and-mouth disease (?) | + | |
| Terracotta pot | Cerepi ^{ALB} | Powdered | Given to animals to ingest | Diarrhoea | + | |

Table 3 continued

| Remedy/veterinary plant taxon | Recorded folk name(s) of the plant/animal/ingredient | Preparation | Administration | Reported local veterinary use(s) or treated animal disease(s) | ALB | RRĂ |
|--|--|--|---|---|-----|-----|
| Tobacco (<i>Nicotiana tabacum</i> L.) leaves | Duhan ^{ALB, RRĂ} | Dried, in decoction | Externally applied | To stop the fall of wool (sheep) | + | + |
| Violet (<i>Viola odorata</i> L.) flowering aerial parts | Lule manushaqë ^{ALB} | On 14 th March hung on animal horns | Ritual use (<i>Halaturka</i> feast) | Considered apotropaic, good for the animals' health and a prosperous dairy season | + | |
| Wild pear (<i>Pyrus pyraster</i> Burgsd.) fruits | Gorrica ^{ALB} | Fermented and distilled into <i>raki</i> | Externally applied | Lameness | + | |
| Wooden stick | Shkop druri ^{ALB} | As such | The ear of the animal is cut and then repeatedly beaten with a wooden stick in order to expel blood | Panacea for several animal illnesses | + | |

ALB: name(s) or use(s) recorded among Albanians

RRĂ: name(s) or use(s) recorded among Rămâni (Aromanians)

In bold: taxa and uses mentioned by at least half of the participants

(Bara 2005; Dahmen and Kramer 1985) could not be instead evaluated, given the restricted and different set of plants considered in these studies.

The analysis shows that approx. one third of the recorded folk names related to plants, which were quoted plants by the Aromanians of Lunca, correspond to plant names of the Romanian folklore.

This finding confirms the linguistic patterns of the Aromanian, which does belong to the group of the Romanian languages, as well as its original trajectory in the folk plant nomenclature in the study area that seems to have been also remarkably influenced by the Albanian language.

Ethnobotany and conservation of plant genetic resources in Eastern Albania

The data presented in this study shows that in Eastern Albania there is still a rich bio-cultural heritage related to plants, at least among the elderly population.

This heritage, however, is under threat. Younger community members tend to migrate to Tirana or Western countries for work or to be more and more detached from traditional agro-pastoral activities, thus interrupting the oral transmission of TEK, and subsequently the complex interplay between use and management of the plant world, which in turn may affect plant biodiversity as well.

The conservation of biodiversity in the two study areas can be implemented than only considering also a “dynamic” conservation of TEK.

Moreover, in one of the most economically disadvantaged areas of Albania, and thus Europe, this complex bio-cultural diversity is crucial for developing a potential sustainable future in the region. In fact, rural areas in Albania—in part because of its political and economic developments of the last few decades—have been largely unaffected by industrialization and still offer pristine environments, which in the near future could attract eco-tourism and attached activities.

In order to implement projects in this direction, however, we believe that ethnobotanical baseline data is fundamental for proposing specific traditional crops, wild plants, and products, whose harvesting and gathering could sustain local economies, as they have done for centuries.

Table 4 Comparison between the Aromanian and Romanian folk plant names

| Botanical taxon | Folk name(s) recorded among the Aromanians (Rrămâni) in Lunca (Albania) | Folk name(s) reported among the Romanians in Romania |
|---|--|---|
| <i>Abies</i> and <i>Pinus</i> spp. | Brad | Brad |
| <i>Aesculus hippocastanum</i> L. | Castagna agra | Castan sălbatic, Castan porcesc |
| <i>Amaranthus retroflexus</i> L. | Ştir | Ştir |
| <i>Asplenium trichomanes</i> L. | Therka agra | Straşnic |
| <i>Capsicum annuum</i> L. | Biber | Ardei |
| <i>Carlina acanthifolia</i> All. | Turtă | Turtă |
| <i>Chenopodium album</i> L. | Lobtu | Lobodă |
| <i>Cicer arietinum</i> L. | Zezera | Năul |
| <i>Cornus mas</i> L. | Cor | Corn |
| <i>Corylus avellana</i> L. | Alun | Alun |
| <i>Crataegus monogyna</i> L. | Murris | Paducel, Mărăcine |
| <i>Helianthus tuberosus</i> L. | Mere di tere | Mere de pămînt |
| <i>Helleborus odorus</i> Waldst. et Kit. ex Willd. | Kukurak | Spînz |
| <i>Hypericum perforatum</i> L. | Erbe di taiura | Sunătoare |
| <i>Ilex aquifolium</i> L. | Pernare | Laur |
| <i>Juniperus oxycedrus</i> L. and <i>J. communis</i> L. | Genep | Ienupăr |
| <i>Laurus nobilis</i> L. | Dafin | Dafin |
| <i>Malus sylvestris</i> Miller | Gormni | Mar pădureş |
| <i>Orchis</i> spp. | Seca | Poroinic |
| <i>Origanum vulgare</i> L. | Rigoni | Sovîrv |
| <i>Petasites hybridus</i> G. Gaertn., B. Mey. et Scherb. | Panacucu | Brustur |
| <i>Phaseolus vulgaris</i> L. | Fasole | Fasole |
| <i>Plantago major</i> L. | Şirişiri | Pătlagină |
| <i>Prunus cerasifera</i> Ehrh. | Pruna agra | Corcoduş |
| <i>Prunus domestica</i> L. | Pruna | Prun |
| <i>Prunus spinosa</i> L. | Zapri | Parumbar |
| <i>Rosa canina</i> L. | Curbiz | Măceş, Rug |
| <i>Rumex patientia</i> L. | Ştei | Ştevie |
| <i>Satureja montana</i> L. | Rigoni alba | Cimbru |
| <i>Sempervivum</i> sp. | Herba da orechie | Urechelniţa |
| <i>Taraxacum officinale</i> Weber | Iarva di lepru | Păpădie |
| <i>Tilia cordata</i> Mill. | Ciai blini | Tei |
| <i>Trifolium</i> spp. | Terfilé | Trifoi |
| <i>Urtica dioica</i> L. | Ruzica, Ruzaci | Urzică |

In bold: similar folk names

Conclusions

The traditional knowledge recorded in the Rrajcë and Mokra areas of Eastern Albanian is demonstrative of a remarkable cultural heritage related to plants and other

wild foods and domestic remedies as well. The ethnobotanical data recorded in this study provides an important basis for both further phytotherapeutic or nutritional research and possible rural development programs.

Among the findings, the uncommon food uses of potato leaves and lacto-fermented potato tubers, the concentrated juice of wild pears, *I. aquifolium* tea as a diuretic remedy, dried wild orchid tuber tea to treat cough and helminthiasis, and elderberry flowers to treat wounds, deserve further investigation.

Approximately half of the plant uses reported by Aromanians were not recorded among Albanians, thus suggesting divergent ethnobotanical pathways, perhaps due to the different religious faiths of the two communities, which have prevented intermarriage for centuries.

Further studies in South-Eastern Europe and particularly in Albania should try to address the dynamics of spatial and, possibly, temporal changes of folk plant knowledge, as well as investigate in more detail the overlap and exchange of plant knowledge among diverse ethnic communities living in the same environment.

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